Amendments to the Claims:

1-28. (Canceled)

29. (Currently Amended) A method for discriminating a type of an optical storage medium, comprising:

employing at least an optical pickup to measure ~~computing~~ a distance between a reflection layer of the optical storage medium and a surface layer of the optical storage medium;

determining a distance error of the ~~computed~~ measured distance between the reflection layer of the optical storage medium and the surface layer of the optical storage medium;

if the distance error is less than a failure threshold, comparing the ~~computed~~ measured distance with a distance threshold to discriminate a type of the optical storage medium; and

if the distance error is greater than or equal to the failure threshold, employing an alternate method to discriminate the type of the optical storage medium.

30. (Currently Amended) The method of claim 29, wherein the optical storage medium is discriminated as a DVD if the ~~computed~~ measured distance is less than a distance threshold.

31. (Currently Amended) The method of claim 29, wherein the optical storage medium is discriminated as a CD if the ~~computed~~ measured distance is greater than a distance threshold.

32. (Previously Presented) The method of claim 29, wherein the alternate method comprises:

reading multiple data transition points from a specified range of the optical storage medium; and

determining a dimension of multiple transition regions in the specified range of the optical storage medium, the transition regions being an interval between neighboring data transition points.

33. (Previously Presented) The method of claim 32, wherein the data transition points are edges of lands on the optical storage medium.

34. (Previously Presented) The method of claim 32, wherein the alternate method further comprises:

obtaining a longest transition region in the multiple transition regions; and

comparing a dimension of the longest transition region to a transition region threshold to discriminate the type of the optical storage medium.

35. (Previously Presented) The method of claim 34, wherein the compared dimension is a time consumption of the longest transition region and the transition region threshold is a time threshold.

36. (Previously Presented) The method of claim 35, wherein the optical storage medium is discriminated as a DVD when the time consumption is less than the time threshold.

37. (Previously Presented) The method of claim 29, wherein the alternate method comprises:

accessing synchronous data from a specified range of the optical storage medium;

configuring a clock frequency of a PLL at a rate based on the accessed synchronous data to enable further data to be read from the optical storage medium; and

comparing the clock frequency of the PLL with a frequency threshold to discriminate the type of the optical storage medium so that the further data can be read.

38. (Previously Presented) The method of claim 37, wherein the optical storage medium is discriminated as blank if the clock frequency is substantially zero.

39. (Currently Amended) An apparatus for discriminating a type of an optical storage medium, comprising:

~~a controller~~ an optical disk system configured to ~~compute~~ measure a distance between a reflection layer of the optical storage medium and a surface layer of the optical storage medium, to determine a distance error according to a measurement error associated with the ~~computed~~ measured distance, to discriminate a type of the optical storage medium according to the ~~computed~~ measured distance and a distance threshold if the distance error is less than a failure threshold, and to discriminate the type of the optical storage medium without regard to the ~~computed~~ measured distance and the distance threshold if the distance error is greater than or equal to the failure threshold.

40. (Currently Amended) The apparatus of claim 39, wherein the ~~controller~~ optical disk system is further configured to discriminate the optical storage medium as a DVD if the ~~computed~~ measured distance is less than the distance threshold.

41. (Currently Amended) The apparatus of claim 39, wherein the ~~controller~~ optical disk system is further configured to discriminate the optical storage medium as a CD if the ~~computed~~ measured distance is greater than the distance threshold.

42. (Currently Amended) The apparatus of claim 39, wherein the ~~controller~~ optical disk system is further configured to, determine whether the distance error is greater than or equal to the failure threshold, and if so, to read multiple data transition points from a specified range of the optical storage medium and determine a dimension of multiple transition regions in the specified range of the optical storage medium, the transition regions being an interval between neighboring data transition points.

43. (Previously Presented) The apparatus of claim 42, wherein the data transition points are edges of lands on the optical storage medium.

44. (Currently Amended) The apparatus of claim 42, wherein the ~~controller~~ optical disk system is further configured to, determine whether the distance error is greater than or equal to the failure threshold, and if so, to obtain a longest transition region in the multiple transition regions and compare a dimension of the longest transition region to a transition region threshold to discriminate the type of the optical storage medium, wherein the compared dimension is a time consumption of the longest transition region and the transition region threshold is a time threshold.

45. (Currently Amended) The apparatus of claim 39, further comprising:

a PLL configured to provide a PLL clock ~~frequncy~~ frequency according to a rate based on data accessed from a specified range of the optical storage medium, wherein the ~~controller~~ optical disk system is further configured to, determine whether the distance error is greater than or equal to the failure threshold, and if so, to configure the PLL clock frequency and compare the

PLL clock frequency to a frequency threshold to discriminate the type of the optical storage medium.

46. (Currently Amended) A processor-readable medium storing instructions for discriminating a type of an optical storage medium, the instructions comprising:

employing at least an optical pickup to measure ~~computing~~ a distance between a reflection layer of the optical storage medium and a surface layer of the optical storage medium;

determining a distance error of the ~~computed~~ measured distance between the reflection layer of the optical storage medium and the surface layer of the optical storage medium;

if the distance error is less than a failure threshold, employing a first method to discriminate the type of the optical storage medium, wherein the first method includes:

comparing the ~~computed~~ measured distance with a distance threshold to discriminate a type of the optical storage medium; and

if the distance error is greater than or equal to the failure threshold, employing a second method to discriminate the type of the optical storage medium.

47. (Previously Presented) The processor-readable medium of claim 46, wherein the second method comprises:

reading multiple data transition points from a specified range of the optical storage medium; and

determining a dimension of multiple transition regions in the specified range of the optical storage medium, the transition regions being an interval between neighboring data transition points.

48. (Previously Presented) The processor-readable medium of claim 46, wherein the second method comprises:

accessing data from a specified range of the optical storage medium;

configuring a clock frequency of a PLL at a rate based on the accessed data to enable further data to be read from the optical storage medium; and

comparing the clock frequency of the PLL with a frequency threshold to discriminate the type of the optical storage medium.